DOCUMENT RESUME

ED 296 852 RC 016 676

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TITLE Knowledge-Based Rural Development: Adult Education and the Future Rural Economy.
PUB DATE Sep 86
NOTE 14p.; Paper presented at the National Invitational Conference on Rural Adult Postsecondary Education (Arlie, VA, September 7-9, 1986). For the conference proceedings, see RC 016 675.
PUB TYPE Viewpoints (120) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Adult Education; Educational Economics; *Educational Objectives; *Educational Planning; *Human Capital; Human Resources; Postsecondary Education; *Rural Development; Rural Economics; *Rural Education; Rural to Urban Migration; Secondary Education
IDENTIFIERS *Human Capital Theory

ABSTRACT

This paper borrows from the idea of human capital (investment in people's skills and abilities) and the notion that increased human capital can, and should, play a larger role in rural development. Although there are arguments against focusing too narrowly on locality in education, locality development is a frame of reference in this paper. It is believed that rural localities and regions can improve their prospects for short- and long-term economic development by increasing locally-relevant investment in human resources, which includes paying more attention to the basic and postsecondary education needs of adults. This document considers whether or not the same training that addresses the long-term needs of young students can appropriately respond to the immediate needs of adults, and reports experiences with different methods of adult training and education. Also considered is the two-way relationship between education and economic development, and notes that while economic development does not necessarily follow investment in education, both should proceed together. A bibliography of 40 items is included. (Author/TES)

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Knowledge-Based Rural Development: Adult Education and the Future Rural Economy

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RC016676

This paper was commissioned for the National Invitational Conference on Rural Adult Postsecondary Education in Airlie, Virginia, September 7–9, 1986.

Knowledge–Based Rural Development: Adult Education and the Future Rural Economy

Among the more firmly held features of American conventional wisdom is that education is a key to both individual success and to society's economic growth and social well-being. If some of the lustre of that formula tarnished during the 1970s it has clearly been refurbished in the 1980s. The erosion of the U.S. competitive position in the world economy, and the emergence of high-tech and an information age, have combined with the "Nation at Risk" and other recent critiques of public education to revive collective belief in the economic importance to the nation of its stock of human capital. This belief is taking form in a growing conviction that new kinds of human capital are needed to effectively respond to new economic conditions and opportunities (e.g. Reich, 1982). Correspondingly, educational reforms are being advocated across the country by politicians, educators, and economic developers alike, as a way of enhancing the capabilities of human resources and thereby, as the conventional wisdom asserts, assuring a brighter economic future for individuals, localities, states, and the nation. Simultaneously new ideas about economic development are coming to the fore.

Education and the Restructuring of Rural America

Evidence is clear that rural Americans have taken the presumed linkage between economic well-being and getting an education every bit as seriously as their urban counterparts. If the operative advice to rural Americans of the nineteenth century was to "go west," it was surely replaced in the twentieth century by "get an education." Implicit in this advice to rural youth was that economic opportunity was located beyond their community, and that leaving home was necessary to link up their education with economic opportunity. Of course throughout this century millions of rural youth followed that advice, and in the process contributed to impressive national economic growth, but also to permanently rearranging the economic and demographic landscape of the country. Indeed, the emphasis on training rural youth not needed on the farm for employment elsewhere has long been the most prominent feature of the nation's rural development strategy, although it was seldom labeled as such.

A history of one-way flow of "human capital" from rural areas produced concentrations of productive capacity and population in cities that were to become metropolitan areas, and also hastened the mechanization and consolidation of farms, and a concomitant constriction of the economic and service role of rural communities. Throughout, national economic growth continued, but unevenly, especially between rural and urban localities. This uneven development has been in a continuous process of being smoothed as both human and physical capital have exercised their option of mobility and moved from places of low return to places of presumed higher return. But experience of this century shows that rural areas have never caught up, despite their own substantial economic development efforts and their having exported their excess, but educated, labor.

The Continuing and Growing Need for Rural Economic Development

After a period of more rapid catching up in the 1970s, because of the rural population turnaround, generally favorable farm commodity prices, and impressive diversification of the rural economy, many rural areas have lost much of the relative gain in the 1980s that they had made in the 1970s. Rural income lags well behind urban income; a disproportionate share of the pockets of poverty continue to be located in rural areas; some of the factories, whose move from urban to rural areas in the '60s and '70s inspired rural optimism, are closing or moving out of the country; and natural resource industries, especially farming, are experiencing a period of crisis. These combine to produce a downward multiplier for rural communities —an ability to support fewer main street businesses and services.

These economic circumstances have coalesced to place economic development high on the list of priorities of most rural localities and regions. Rural community surveys across the country generally reveal that community residents feel that adding more jobs is their community's greatest need. They want to change the direction of their multiplier by adding jobs—for youth who otherwise are forced to leave; for farm operators and spouses looking for off-farm income to enable them to stay on the farm; for those who are commuting substantial distances for employment; and for those whose poverty is attributable to unemployment or, more often, underemployment. In their efforts to add jobs and preserve their communities, many rural localities continue the traditional economic development strategy of searching for a factory to move to their town. This strategy worked, at least

temporarily, for many rural communities in the past, but the odds of attracting an industry are becoming longer, while the need for rural jobs is growing (Deaton, 1986).

New Directions in Rural Economic Development

Rural communities are now seeking new directions and new forms of support for their economic development efforts. This search is reinforced by general trends across the society which show that most employment growth is occurring in the information, technology, and service sectors, and that small business is found to be the greatest contributor to new employment. More attention is being paid to job creation, in addition to, or instead of, "smokestack chasing;" and a search is on for entrepreneurs who are increasingly being looked to for job creation. An emphasis on entrepreneurship is leading also to the formation of economic development incubators, community development foundations, sources of venture capital, vocational training programs emphasizing entrepreneurship, etc. On the natural resource and agriculture side, more attention is being devoted to alternative crops and enterprises and to value-added agriculture, i.e. processing or changing agricultural commodities to create jobs and produce a higher value in the market place.

But important to all these changes in economic development technique and strategy is an underlying notion that education and new and different human resource skills and abilities are a necessary foundation for any of these strategies to be effective. A more frequently heard term is "knowledge-based development" (Deaton, 1986). This changing perspective of education and training as fundamental to local economic development includes a strong emphasis on adults as the students. As suggested by Deaton, "The information revolution currently shaping the sources and distribution of economic change in both rural and urban communities, places a premium on continuing education, manpower training and other components of human capital investment" (1986, p. 172)

A Perspective on Rural Development and Adult Education

To an important extent this paper borrows heavily from the idea of human capital, and the notion that increased human capital investment can, and should, play a larger role in rural development. Our position can be summarized as follows: that rural localities and regions today can improve their prospects for both short-run and longer term economic development by judicious and more locally relevant investments in their human resources. We see this position as representing a departure from past norms of rural human resource development in three important ways: 1. investment with local and regional economic development efforts; 2. greater attention to assessing and providing for the education and training needs of specific localities and regions in addition to preparation for the general labor market; and 3. more specific and conscious attention to both basic and postsecondary education and training needs of adults.

In contrast, the frame of reference of public (secondary) education has generally been the society (rather than the locality) and that students should be trained and educated to be economically and socially mobile within the society—to go wherever their options seem best and to be able to adapt. It is defensibly argued that if education and training of youth focused too narrowly on the locality, it would limit their future mobility and thus do them a disservice. But as we have suggested above, locality development is a part of the frame of reference of this paper along with forms of human capital that can contributed to that objective.

In part, our perspective is also based on how far removed the future is for the student. In the training of youth the future is generally the long run, or at least a year or two away. For adults, the future for which they are seeking training is more likely to be now. Training for adults should therefore concentrate on their immediate needs, although not to the exclusion of the longer term. It is therefore questionable whether the same institutions and approaches designed for the training of secondary students are necessarily the most effective for the training of adults. Correspondingly, a part of the paper will report experiences with different methods for adult training and education.

The third point of emphasis concerns a more intentional linkage between education and training and economic development. We emphasize a relationship that works both ways—development plans and strategies based on an assessment of human resources available (or potentially available through training) and educational and training designed to support feasible development objectives. There is a widely held view about the relationship between economic development and education investments that research is proving to be questionable—that is, that an investment in education precedes (causes) economic development. Williamson (1979) reviews the experience of both industrial and many third world countries and concludes there is little support for the idea that economic development necessarily follows from (is caused by) an investment in education. Rather the weight of evidence suggests that education investments and economic development efforts should proceed together. Or, as suggested by Bowman, "Whatever encourages innovative performance and the pursuit of excellence in economic life will stimulate both formation of human resources and their more effective utilization" (1979, p. 159).

Before addressing each of these points in greater detail we first step back to review some of the literature on the idea of human capital and some modifications made to that concept in recent years.

The Idea of Human Capital

That so many of us have come to refer to education as an "investment" is clear evidence that the idea of human capital has become a part of much of our thinking about education and other formal ways of acquiring marketable skills. The acceptance of the idea of education as investment is important to our support for public education and what we expect from it.

The idea of human capital is an economic growth and development idea. It specifies that, among the other factors of production, the skills and abilities of human beings, over and above their physical effort as labor, are a contributing factor to economic growth. The idea has been around for along time but it did not come into general use or have much influence on public policy until the 1960s.

Attention began to focus on human capital following World War II as economists found that classical economic models which attempted to account for economic growth through increases in land, labor, and physical capital were not adequate to explain the sustained economic growth that was occurring (Williamson, 1979). This motivated analysts to turn their attention not just to the quantity of labor, but to its quality. It was T. W. Schultz (e.g. 1961) who is credited with demonstrating that a significant portion of the nation's economic growth could be attributed to qualitative improvements in the labor force which resulted in increased labor productivity. Although the quantity of labor is easy to measure, its quality is not, leading Schultz and other investigators to turn to educational attainment as a proxy measure for labor quality (human capital). Much of the research focused on assessing the relationship between various levels of individual educational attainment and their subsequent earnings. An underlying assumption of this work was that the market was working, and therefore that individuals with more education were earning more because employers were rewarding their greater productivity.

Also important to this research was the notion that education is an investment made by both individuals and society, which produces a future return in the form of greater earnings to the individual and greater productivity and therefore economic growth to the society. It was the idea of education as an investment in human capacities that was fundamental to the conceptualization of increased human capacities as human capital. As described by Mincer, "Since benefits derived from these activities accrue mainly in the future, and are for the most part quite durable, the costly acquisition of human capacities is an act of investment" (1979, p. 1).

The public policy implications of the idea of human capital are significant since, in contrast to the other factors of production, it is the public sector that makes a substantial part of the investment. There was already in place a tradition of public support for education, but Schultz's work reinforced it by pointing out " . . . there is greater imperfection of the capital market in providing funds for investment in human beings than for investment in physical capital" (1961, p. 4). Schultz used that observation as a basis for greater public investment in education as a part of society's economic growth strategy. The public investment is expected to materialize in private returns as well as contribute to overall societal welfare. One outcome has been a growing interrelationship between public educational and economic policy. The importance of this work for both economics and policy is underscored by Schultz subsequently being awarded the Nobel prize for his efforts.

The idea of a direct relationship between a society's investment in education and its state of economic development became so widely accepted that this linkage became a part of the prescription for economic development in most third world nations. In the U.S., attention to the idea of human capital has been heightened in the 1980s as both national and regional economic growth have emerged as major concerns. Recent years have produced numerous exhortations for the nation not only to increase its stock of human capital but also to change its form, as a strategy for dealing with the economic complexities of the 1980s (cf. Reich, 1983).

Returns to Schooling

Although human capital includes all marketable human skills, abilities, and capacities, the research it has inspired has generally focused only on formal education attainment. Therefore much of what is known about the rate of return to human capital investment can more accurately be described as returns from investments in formal schooling.

For the society, Denison (1962) concludes that investments in education have historically accounted for at least 30 percent of increased national income. Denison's analysis includes returns to society from combined public, private, and individual investments in education. Tweeten summarized some of the research on returns to individuals and reports that " . . . educational payoffs are realized from both individual investments by a student and family and social investments of public and private resources . . . the overall return to public investments in a college education was about 9 percent. . . . payoffs to individuals from investments in a college degree ranged from 14 to 20 percent for different race and sex groups in 1969. Returns to both public and private investments were higher for elementary and secondary schooling than for college" (Tweeten, 1980, p.10).

Because much of the research has focused only on the returns from the number of years of schooling completed, Deaton and McNamara (1984) contend that most economic analyses of these issues have been deficient. Some of these deficiencies are noted by Welch (1975) in a review of findings. Welch observes that most of the research on investment returns has omitted such important income-influencing factors as family background, individual ability, and the quality of the schooling received. Despite these deficiencies, and even after adjusting for ability and family background, Welch found no study that showed a zero net return to schooling.

Some Qualifications

Criticism of the research on returns to schooling can be broadly classified as: 1. those that question what marketable human capacities are actually acquired in school; 2. those that emphasize the influence of family background and social class on both earnings and schooling attainment; and 3. those that emphasize that schooling is only one of many different ways economically important human capacities are acquired. This last point is especially relevant with regard to adult education and small communities, and will be elaborated upon later in the paper.

While schooling is generally associated with acquiring cognitive skills that have labor market value, there are those such as Gintis (1971) who contend that schools serve more as a vehicle for industrial socialization (work attitudes, habits) and that it is work habits that are being rewarded in the market place. Indeed Wilms (1984) reports survey results from a California study showing that most employers prefer good work habits and attitudes to technical skills, especially for occupations that take less than six months to train for.

There are other critics who contend that schools serve as a filter to sort individual differences in ability that exist independently of schooling. Mincer argues, however, that these critiques do not diminish the practical importance of the relationship because "it does not matter whether the increased marketability produced by schools is due to their affective, informational, or cognitive function" (1979, p. 27). He concludes that the market has tended to respond rather predictably to an individual's success in school regardless of what that success may be attributed to.

More troublesome, however, is the effect of family background and socioeconomic status on individuals' earnings regardless of their level of educational attainment. Directly put, the return on educational investment has been demonstrably influenced by WHO the investment is made in. Jencks, et al. (1972), and Bowles and Gintis (1974), for example, have produced important research demonstrating that the best predictor of the earnings of an individual is not education as much as the level of income of his/her parents. Their research emphasizes that education alone does not provide a guarantee of enhanced lifetime earnings. The social class position of the individual has an important attenuating influence on how much the individual benefits from formal education. Wage rates for people with similar levels of educational attainment vary substantially by sex, race, where they live, etc. (Tweeten, 1980).

From the perspective of this paper these findings suggest, among other things, that it is not schooling alone that is being rewarded in the market place. For many individuals there is an ineffective or nonexistent linkage between education and economic opportunity. This is a foundation of one of the positions being taken in this paper—the need for a more direct link between education and training and economic development efforts.

Adult Education and Nonformal Means of Acquiring Human Capital

With the focus on schooling as the principal producer of human capital there has been a relative neglect of human capital formation among adults. As stressed by Bowman (1979) and others, human capacities are acquired or developed through informal, as well as formal, education and through training, experience, and mobility in the labor market. In other words human capital does not cease to accumulate with graduation. As emphasized by Bowman, "The high visibility of school, and the involvement of governments in school systems have led to biased perceptions of how human resources are formed—specifically failure to appreciate the importance of out-of-school agencies in human resource formation. One of the consequences has been an unrealistic tendency to expect schools to do things for which they are ill-adapted. This has been unfortunate for both the school and society." Bowman continues to state that: "Out-of-school learning has been, is, and will continue to be of crucial importance for the functioning of a progressive economy" (1979, p. 158).

There is a range of research results demonstrating individual and social benefits from a variety of out-of-school educational programs—both formal and informal. Bowman (1979) reports research showing that post-school contributions of schooling to human resource formation in Japan were one and a half times the contributions of schooling above the compulsory levels. Similarly Borus, et al. (1970) report significant earning gains among young males as a result of participation in Neighborhood Youth Corps programs. Others have reported substantial benefits in increased productivity of farmers from their participation in informal extension education programs. Honadle (1986) also reports substantial rural community benefits attributable to extension economic development educational programs.

Where the Returns on Investment Occur: The Rural Deficit

Geography is an important consideration in assessing benefits from various forms of educational investment. *Where* the investment occurs affects the rate of return and beneficiary. Rural and agricultural communities provide a special case.

A high rate of return to investment in education has been sustained in part because individuals can be mobile in responding to markets for their skills. If the locality in which their skills were acquired does not offer opportunities to put them to good use economically, individuals are free to move to other communities or regions where appropriate employment may be found. Because this mobility generally occurs within the boundaries of the nation, it is relatively easy to determine the nation's return on investments (taken as the total of local, state, federal, and individual investments). It is much more difficult to determine how much benefit accrues to the locality that made a substantial investment in an individual's education and training. Because the individual takes the educa-

tion and goes somewhere else to take economic advantage of it, the individual and nation both benefit. It is less clear how the community which made much of the investment benefits. These are what are termed "spill-over" effects.

Given the past rate of out-migration of more highly educated and/or skilled young adults from rural communities, the more diverse and sustained economic growth in metropolitan areas, and the fact that localities contribute about 45 percent of the total investment in education, it is the educational investment of rural communities that has generally produced a less visible return. In effect it is contended that rural communities have subsidized urban-based economic growth.

Given the spill-over effects, would rural communities be better off if they reduced their investments in the education and training of their youth and residents? Not making those investments would likely produce community residents having little education and/or skills and therefore confined to those economic opportunities the locality has to offer. It is argued that more populated but poorer rural communities would result.

Because of spill-over effects Deaton (1986) and Tweeten (1980) both contend that a strong case can be made on equity grounds for greater state and federal support for rural education and training. However, that is another issue. The question of concern in this paper is whether rural communities can, through more effectively linking their economic development efforts with training and education, capture a larger part of the return on their investment within the locality or region.

The Current Climate For Rural Development

Economic change and federal policies have contributed to the emergence of a very diverse rural America. The proportion of the nation's population living in rural areas has changed very little over the past 40 years, but who makes up the rural population and what they do has changed markedly. While not too long ago rural areas across the country were principally populated by large families on small farms and small communities existing to serve their needs, that is no longer the case. Upwards of one-third of the nation's population continues to reside in rural areas, but only a small fraction of that population is directly involved in agriculture. Current farmers can be subdivided into an even smaller fraction of full-time, large-scale commercial farmers and a much larger number of small farms whose operators depend largely on off-farm income and earnings. But together, farmers and their families today comprise less than 10 percent of the nonmetropolitian population.

Agricultural production has also become more geographically concentrated. The commercial farms are disproportionately located in the Midwest and in Texas, California, and Florida. It is really mostly the Midwest that has been experiencing the brunt of the farm crisis.

Economically, manufacturing employment has become the major source of rural income, followed by service employment, government employment, transfer payments, and property income. Three factors appear to have contributed most to the movement of manufacturing plants to rural areas: an opportunity to take advantage of cheaper and unorganized labor, the very significant efforts of states and local governments to attract industries by supplying facilities and infrastructure, and federal investments in interstate highways and other infrastructure that make rural areas more economically accessible. The South generally gained most from the urban-to-rural movement of industries.

In addition, many rural localities have grown and, in the process, have become largely nonfarm because they were adjacent to growing metropolitan areas. Some urban residents moved to the close-in rural areas in search of a changed quality of life while retaining their job in the city. Still other rural communities have grown because they have been located on an interstate highway or because of their proximity to major recreational sites. In these cases the source of the growth has been principally ex-urbanites who typically have taken up a rural residence but retained an urban source of income. The energy crisis of the '70s contributed to many localities becoming boom towns, although their fortunes have as quickly changed with falling energy prices.

Changes In Rural America

What is important about these changes (and many more that could be specified) is that they have contributed to a different climate and a different set of rural aspirations for development than would have been found in the 1960s. Consequently there has emerged a search for new directions and strategies for development as well. The paragraphs that follow attempt to identify some of the principal features of this changed climate and ways in which they are contributing to changed perspectives about the prospects for rural development and how it can be achieved.

1. Rural communities, although fully integrated into the national economy for a long time, have become increasingly dependent on outside economic forces and decisions over which they have little control. If the reality of outside dependency has changed little in recent years, rural communities' *awareness* of it has. Rural communities have become acutely aware that a factory they worked hard to attract to their community may close or move on short notice because of decisions made a long way from their town. Residents of farm communities can now describe in detail how the price of farm commodities and farm land, and therefore also the economic welfare of their community, is influenced by foreign trade, strength of the dollar, Federal Reserve policies, soybean production in Brazil, etc.

Increased awareness of this dependency is leading more rural communities to seek economic activities that are more locally based and that have a greater commitment to their locality. This is a factor in the current rural emphasis on "value-added" agriculture as a strategy for rural development.

2. Rural America has become a mosaic of such diversity that it is difficult to make any generalizations about rural areas, and even more difficult to formulate national rural policies that meet the needs of diverse regions and communities. Communities only a few miles apart may face quite different economic prospects.

As a result, there appears to be an increasing tendency for rural communities to look at some of the unique features of their locality as a basis for development. There seems also to be less expectation of a major federal role in rural development.

3. In part because of the diversity, rural America has come to incorporate numerous special interests, many of which are in conflict with each other. Agriculture is a case in point. Commercial farmers have generally become specialized producers of one or a few commodities. From this have grown national commodity organizations each of which has important policy and marketing interests that are competitive with each other.

Simultaneously, there is a growing awareness that rural communities have become increasingly fragmented along institutional, occupational, and other special interest lines. This fragmentation has inspired new interest in recreating a sense of community in rural areas.

4. The kinds of economic growth and change that have occurred in rural areas recently have not been heavily dependent on human capital. An exception is agriculture which continues to become more knowledge and skill dependent. But as Bluestone and Harrison (1982) emphasize, much of the rural expansion in employment has been in low-wage, low-skill, dead-end occupations and industries.

Because of this, more rural development leaders now speak of the need for quality economic development.

5. The theme in the 1960s was consolidation. It was a time when many schools where consolidated in an effort to make them more like urban schools. Rural economic development efforts concentrated on growth centers and multi-county functional economic areas. Support for these strategies has diminished and rural leaders appear to be looking for alternative ways of providing for their community services. There appears to be greater interest among rural leaders in trying new ideas and experimenting with different methods for accomplishing such community purposes as provision of public services, education, economic development, etc.

Thus, we perceive the climate for rural development today as being receptive to innovation in all areas. This receptivity is linked with a greater locality orientation and a very great perceived need for quality and more locally controlled, economic development. Many rural leaders could be expected to agree fully with those rural analysts who suggest that new directions for rural development must be more "knowledge-based" (Flora and Darling, 1986; Rosenfeld, 1986; Deaton, 1986).

Knowledge-Based Rural Development

Tweeten stated clearly the relationship between human capital formation and rural economic development: " . . . interaction of job development with human resource development constitutes the whole of economic progress in rural development" (1980, p. 12).

The key word in Tweeten's statement is interaction—that job development and human resource development proceed together in a coordinated way. They can, and should, influence each other. But that is more easily said than done. Even in small rural communities, there is a tendency for economic developers to go their way and educators, manpower trainers, etc. to go theirs.

If there is a chicken and egg question, the evidence is on the side of quality rural development being more likely to occur if the job development "chicken" precedes the human resource development "egg." That is especially the case with local job creation efforts. It is less true when the rural development strategy is to attract employers from outside the locality.

Bowman (1979) and Williamson (1979) both cite a tendency for schooling to move ahead of development. As Bowman emphasizes, "In time, schooling can easily lead development in human resources, because to turn out school graduates does not depend upon or require participation or observation of production processes. By their very nature, schools are isolated from 'work'; this is their advantage as well as their limitation. In most countries today schooling may be leading development—partly because schooling has become a fashion" (1979, p. 156).

Williamson, in stressing a closer linkage between economic development efforts and education, emphasizes a need for education to be geared to immediate needs of production. In this regard he states that: "Development, as opposed to growth, is likely when education is widely available, geared to or at least consistent with the immediate needs of production, yet embodying a vision of a better society in the future in which the benefits of growth will be widely diffused" (1979, p. 208). He also emphasizes a tendency for policy makers to view education as a *commodity*, arguing that development should begin with the realization that education is not so much a commodity as a program of action.

A knowledge-based program of action for rural economic development would likely incorporate some of the following features:

1. Creation of an umbrella community organization. We noted above a tendency for rural communities to become increasingly fragmented in recent years. This must be overcome if community human resource development effectively coordinated with their economic development efforts. Small communities have a small resource base (including leadership) and cannot afford a duplication of effort or a failure to take full advantage of the resources they have.

Such an umbrella organization (Flora and Darling, 1986) should be broadly representative of community interests and should especially incorporate the educational organizations and agencies that have seldom been explicitly involved in economic development efforts. There appears to be a growing realization on the part of rural school administrators, for example, that the school should play a broader community and educational role. Typical of this view is a recent statement by James Jess, superintendent of a small Iowa school and a prominent rural educator: "The single most important attraction for the rural community's future development is the school" (Tevis, 1986). Jess proceeds to recommend a much closer involvement of school with community. He advocates prioritizing how schools can improve to serve children and the community. Jess describes how their school implemented this perspective by pointing out that 15 years ago their school served 450 children, K–12. However, because of declining population their school today has a much smaller K–12 enrollment. Their school adapted and Jess points out that today they are still serving 450 community *residents*: 50 preschool, 250 K–12, and 150 adults.

An umbrella organization is needed to provide for community mobilization and coordination, the identification of objectives and resources, including venture capital and entrepreneurs, the determination of what skills and capacities will be necessary to implement their plans; and the development of new organizational strategies for achieving these purposes.

2. Targeting economic development objectives. This requires a careful assessment of local resources, both physical and human. Sound scientific knowledge should be used in doing such assessments. Educational and informational assistance can usually be obtained from such outside sources as state and regional economic development agencies and the Cooperative Extension Service of the state land-grant university (Deaton, 1986; Honadle, 1986).

Such analyses should help localities identify those enterprises that the community needs and can support, and those that have the greatest probability for growth and quality job development. This exercise should also be informed by the fact that more than 80 percent of the economic growth of typical American communities results from creation and expansion of locally owned and operated enterprises (Flora and Darling, 1986). Expansion of existing enterprises may be more productive of quality jobs than attracting an enterprise from outside the community or establishing a new one.

3. Determining necessary resources and how they can be mobilized to accomplish economic development objectives. It is at this point, when specific enterprises have been targeted, that needs for training, venture capital, additional information, etc. can be more precisely specified. It may be at this point that communities find they can make use of new forms of organization or resources they haven't previously tapped to support economic development.

For small communities, one key to economic development is to locate and support entrepreneurs from within the locality if possible. Entrepreneurship has often been hampered in the past by an absence of suitable training and support and the widely held conviction that a high proportion of small businesses fail. Communities can do something about the first problem and the second may be exaggerated. Albert Shapero, along time student of entrepreneurship, has observed that statistics on small business failures are inflated, because many of the "failures" are "repeat offenders." The same entrepreneur may start several ventures and fail, before he/she hits on one that makes it.

In order to increase the prospects for successful ventures, communities need to identify persons having entrepreneurial talents or potential and provide them with necessary training and support. As we mention in the next section, women and displaced farmers are often overlooked sources of entrepreneurial capability in rural communities. Identifying existing human capital not being fully utilized can be as important to economic development as investing in new training and development. With community backing, one of the ingredients of entrepreneurial failure can be eliminated.

New methods are being tried to identify and support entrepreneurs. One such approach is that of business or venture incubators (Buck, Hobbs, 1984). The purpose of such incubators, as the name implies, is to nuture and "hatch" new enterprises. Having identified a prospective enterprise, and a prospective entrepreneur to match, the incubator provides technical assistance, feasibility analysis, and counseling; helps make arrangements for necessary training; and may assist in locating sources of venture capital. The idea is to give the new enterprise a running start. An approach similar to this is advocated by Sher (1976) except that Sher identifies public schools as an appropriate location for providing students who are prospective entrepreneurs with locally relevant training and experience. Sher describes these as School Based Development Enterprises (SBDE). Many successful SBDEs are operating in rural communities around the country, supplying students with appropriate training and at the same time providing a useful community business or service. The important thing about either incubators or SBDEs is that they intentionally link training and education with establishment of new and viable community enterprises. Both also rely heavily on using existing community resources, but in nontraditional ways.

As we mentioned earlier, communities may gain as much or more from expansion of existing enterprises as from enticing existing firms to relocate or establishing new enterprises from within. Expansion may require the same degree of study, analysis, planning, community support, venture capital, and training support as the establishment of a new enterprise. The object—to add quality jobs—and the methods would be pretty much the same.

But even if rural communities stay with more traditional industrial development strategies, the quality of a locality's human resources do contribute to their prospects for attracting enterprises (Smith, et al. 1980). Especially important in this regard can be an informed and responsive community leadership (McGranahan, 1984).

For new and emerging industries the technical competence of the work force can be a particularly important factor. We recently conducted research on factors associated with the location of various high technology firms in nonmetropolitan college and university towns (Buck, Hobbs, et al., 1984). We found that the single most important factor influencing the location decisions of the founders of these firms was the availability of technically competent personnel. The founders also reported that having good schools in the locality was more important to their firm's location than such traditional industrial attractions as industrial parks, sewers, water systems, transportation routes and freight services, raw materials, etc. We stress this finding because the kinds of firms we focused on in our research were knowledge-based enterprises.

Some Priority Populations for Training

While the need for continuing education can be assumed for all adults, there are some categories of rural people for which additional education and training investment might pay particularly high dividends for rural communities.

Adult basic education. We have emphasized, and a substantial amount of research supports the fact, that rural areas retain a higher proportion of adults who are either illiterate or largely unskilled (Rosenfeld, 1983). That is one of many factors contributing to a higher proportion of poverty in rural areas. In the 1960s a Presidential Commission on Rural Poverty entitled its report "The People Left Behind." The message of that report was clear—that those rural people who had a skill that could not be marketed locally migrated to where the jobs were, leaving behind those whose lack of skills placed them in dead-end jobs or in no job at all.

Despite considerable progress in raising the average level of educational attainment of rural adults over the past 20 years, a substantial problem still remains. Rosenfeld (1983) recently analyzed the need for basic training among rural adults in the South and reported that about one-fifth of people over 25 and lacking basic skills will still be in the labor force in 2000. He reports that adult illiteracy is highest in rural areas, among minorities, and among farm workers. Not coincidentally, the areas of highest concentration of adult illiteracy were also those that remain the rural "pockets of poverty."

In order to be effective, methods of adult basic education should be carefully reviewed. Those methods that seem to work best rely on volunteers and take basic education out of the classroom and into the home, community, and job (Rosenfeld, 1983).

Farmers. In recent years many small-scale farmers have retained their farming operations by taking off-farm employment and becoming part-time farmers. While that may not be the most desirable solution, the fact remains that it was growth in off-farm employment in many rural areas that made this transition possible. The alternative would have been for those farmers to leave farming and the locality entirely. Even then, their prospects for adequate earnings would have been minimal without marketable skills.

The farm crisis has made it impossible for a growing number of farmers to remain in farming and support their families. Many of these displaced farmers are in their 30s and 40s and are faced with the need to make a major mid-life career change. Further, many would prefer to remain in the community and reside on their farm even if they do not farm the land (Flora and Darling, 1986).

There is a major need to provide training programs that will assist displaced farmers to enter the nonfarm economy. Farmers, however, differ in training needs from some other rural residents in that they have substantial manual and business skills that can potentially be transferred to other forms of enterprise. As suggested by Flora and Darling, " . . . these skills are not being directly transferred by farmers to off-farm activities that could diversify their income generating opportunities and add to community growth. Establishment of a skill-adapting clinic for farmers interested in local off-farm alternatives could prove to be a local institutional innovation key in rural development" (1986, p. 208). The skills and abilities of farmers, if effectively transferred to other forms of enterprise, could be a major resource contributing to rural communities' economic development efforts.

Women. Whether by economic necessity or choice, rural women have been as likely as urban women to enter the outside labor force. Many are farm wives who have taken off-farm employment to enable the family to remain in farming. However, many such women did not anticipate a career or vocation and consequently are lacking skills or training for more economically rewarding occupations. A result is that whatever opportunities have been available to them have most often been in minimal skill occupations such a low paying service or manufacturing jobs.

Women have become a fixture in the outside world of work. Their economic productivity is important to them personally as well as to the economic well-being of their families and communities. Most rural communities include women who are highly trained in careers and professions for which there is no local employment opportunity. Such women, with some additional training and community support of the type described above, could become prospects for the establishment of enterprises that could contribute significantly to community development.

Postsecondary youth. Rural community youth who never aspired to postsecondary training have, more often today than in years past, been trained in a skill through an in-school program or an area vocational school. If such youth, as a matter of choice, prefer not to leave the community they may find there is no local market for their skill. Thus if they are employed, they are likely to be underemployed. Or, as has been more likely in recent years, they may have tried the market outside the locality but were unsuccessful in finding appropriate employment; so they have returned home.

Since training for self-employment or entrepreneurship has only recently begun to be incorporated into vocational training programs, it is possible that past graduates may be lacking in the skills or the perspective necessary to consider establishing their own enterprise. As has been observed regarding rural

communities—the only way to get a good job as a welder is to open your own welding shop.

Thus, a part of a rural community economic development strategy might include identifying youth in the community who have been trained in skills that match community needs and organizing the further training and organizational support to create new enterprises. There may not be a job opening for a welder, a remodeling carpenter, a body and fender person, a bookkeeper, etc. but there may be sufficient local demand for any such services to economically justify establishing such an enterprise.

Leadership training. Rural communities differ from urban communities in their greater dependence on lay volunteer leaders. Local governments and many forms of necessary public services are predominantly staffed and managed by volunteer leaders. This is a matter of necessity. Rural communities are too small to afford the staffs of professionals who are largely responsible for the operations of governments and public institutions in larger communities.

So rural leaders and volunteers tend to have a powerful influence on rural community life and initiatives. As emphasized by Flora and Darling, " . . . nothing dramatic gets done in small population centers in the U.S. without the help of volunteers from within the community . . . the smaller the city is, the more important volunteers are in the process of community change" (1986, p. 209).

So the actions and decisions of local leaders are a crucial factor in rural community economic development efforts. Innovative initiatives will depend on innovative leadership. There are two implications for continuing education: (1) leadership training; and (2) on-going seminars and other forms of informational support. Flora and Darling make a case for leadership training emphasizing that " . . . good community leaders are trained by experience and by instruction; they are not innately endowed. . . . among the scarcest resources in rural areas are individuals who can provide good leadership and are willing to take on leadership responsibilities. . . . the other scarce resource in rural areas is individuals who can find, process, and put into usable form information useful for community development decision-making" (1986, p. 209).

Good economic development planning requires not only accurate assessment of local resources and needs but also on-going assessment of how economic change is affecting community enterprises and opportunities. Regardless of how skilled community leaders may be, their effectiveness will be enhanced to the extent that they have continuing access to information relevant to their local economy. This need is emphasized by Deaton who states: "Community decisions are major determinants of the economic base and quality of rural life. Local leadership needs the support of applied research and extension in order to carry out its responsibilities for economic development" (1986, p. 172).

Further Thoughts on the Content of Rural Adult Education and Training

There are two major criteria for planning the content of rural adult education programs: (1) content which equips participants to adapt to changing human capital demands in the society in general; and (2) those skills and abilities linked to immediate and specific features of communities' economic development efforts. In effect this is a distinction between educational policies and programs that are oriented toward long-term goals and are less location-specific in their application, and those training policies and programs oriented to short-range goals and targeted economic development activities. Both should influence the content of any locality's adult education efforts. Both criteria are suggestive of changes in our approaches to adult education.

Education. Although it has become fashionable in recent years to emphasize the need for basic education and problem-solving skills, this emphasis was stressed 20 years ago by Schultz. Schultz observed that "the obsolescence of capital, including the capital that is formed by education, is real, in large part unpredictable and important" (1966, p. 302). He goes on to emphasize that with an uncertain future it is wise to postpone specialization in education in order to retain flexibility. He contends that specialized skills should be acquired through on-the-job training and that education " . . . ought to give a low rating to instruction that is specific. We ought to give a high rating to learning principles and theories. We ought to give the highest priority to instruction which is devoted to problem-solving using analytical methods" (1966, p. 303). Made some 20 years ago, Schultz's observations are in full accord with many recent education and economic development policy statements.

Although we are emphasizing the relatively neglected need for greater targeting of adult education efforts to coincide with local and regional economic development plans and goals, rural development plans and goals, rural development would not be well served if education limited rural residents will be enhanced if their skills and abilities are transferable both geographically and across different occupations. While Schultz's observations were oriented primarily toward in-school programs, we stress that general education should be incorporated into rural adult programs as well.

One area of content having substantial transfer value and still highly pertinent to specific economic development initiatives is the entrepreneurship training we have emphasized. Effective entrepreneurship usually embodies problem-solving, managerial, and analytical skills in addition to those pertinent to a specific enterprise.

Training. There is both a theoretical and practical rationale for shifting more skill training away from secondary schools and toward adult programs. The theoretical rationale is supplied in Schultz's comments concerning the planning horizon—for adults the future is now and the need for a marketable skill is immediate. The practical rationale is that rural communities should be targeting their economic development efforts based on careful study and analysis of their

resource base, location, markets, etc. Their analysis of resources should include both human and natural resources. Once specific development goals have been established and it is known what human resources (skills) are available and which are needed, the most essential component of a community training plan has been completed.

But if training is to be specific to local needs, there is an implication that some of the traditional methods of training must be modified as well. Small communities comprise small labor markets and usually have a wide range of occupations, but with very few persons in each. There may be some occupational niches but these are unlikely to produce a demand for more than one or a few in each. Consequently training that follows the standard classroom model is likely to produce skills in excess of the capacity of the locality to employ them. Most of the alternatives to the classroom model involve some variation of on-the-job and/or apprenticeship training. Training of adults must also be flexible to incorporate training into a schedule of work, family, and community responsibilities. This is important not only because of scheduling difficulties of adults, but because knowledge-based development requires new capabilities and new methods of providing them. As remarked by Reich, "collaboration and innovative problem solving skills simply cannot easily be learned in a routine and tightly controlled environment" (Reich, 1982).

In effect the training must be customized and tailored to the specific individual(s) being trained and the economic opportunity being trained for. Although some borrowing of ideas and approaches from other communities may occur, the most effective training strategies for any locality may be those it works out for itself to fit its circumstances.

Policy Issues

We have intentionally focused on those kinds of initiative that many rural communities can undertake their own to achieve quality economic development. But obviously there are limitations. The economic resource base, size, and location of many rural communities make their prospects for self-initiated economic growth problematic at best. There is a need for a strong national commitment to rural development that would add to the effectiveness of local and regional efforts. Such a call has been made frequently in the past but to little avail. Consequently we turn to some more specific policy initiative that, if taken, could support rural communities in the kinds of efforts we have described.

1. There is a need for rural communities to have ready access to locally relevant and understandable information on which to base their economic development plans. This needs to be accompanied by educational programs and technical assistance which will acquaint rural communities with realistic economic options and help them evaluate the prospects for success of those they have chosen. Economic development planning cannot be current if it is not based on current information and analysis. The most likely providers of such support services are state governments and/or the public service functions of state universities. At this time, there is a very uneven availability of such services across the country.

2. Since states are the major supplier of public education, and since approximately 50 percent of the funds to support it comes from state sources, the state becomes an important potential partner in adapting educational resources to the needs of different localities. States need to encourage rather than discourage innovations in education that will facilitate closer collaboration between public education and the communities in which the are located. States might well address how the resources of public schools might more effectively be addressed to adult education needs and which kinds of vocational education (both secondary and post-secondary) might be most appropriate for small communities facing very different economic circumstances.

In addition a state-wide commitment to developing and maintaining a high quality educational system for different sizes and kinds of communities and for all sectors of the population will most likely work to the benefit of smaller rural communities.

3. Across the country, states have made a strong commitment to economic development. It would be appropriate for states to review, as we have suggested that individual communities review, how they can more effectively link their investments in human capital with their economic development plans. A review of how state economic development policies encourage, or frustrate, the aspirations of rural communities should also be addressed. In effect there is a need across the country for industrial and economic development policies that are more consciously linked with education and manpower development policies.

4. Because they are small, the economies of rural communities are more vulnerable to quick changes in fortunes, e.g. a plant closing, a rash of farm foreclosures, a mine closing, etc. State and federal programs such as manpower training should provide for more effective targeting of services when a community is faced with a dramatic economic change.

Bibliography

Bluestone, Barry and **Bennet Harrison.** *The Deindustrialization of America.* New York: Basic Books. 1982.

Borus, Michael E., John P. Brennan and **Sidney Rosen.** "A Benefit-Cost Analysis of the Neighborhood Youth Corps: The Out-Of-School Program in Indiana." *Journal of Human Resources.* V:2 1970, pp. 139–159.

Bowles, Samuel and **Herbert Gintis.** *Schooling in Capitalist America: Educational Reforms and the Contradictions of Economic Life.* New York: Harper. 1974.

Bowman. "Out-Of-School Formation of Human Resources." Chapter 5 in National Academy of Education, *Economic Dimensions of Education.* 1979.

Buck, A., D. Hobbs, et al. "Feasibility of High Tech Companies Incubation in Rural University Settings." *SBIR Report.* Rolla, MO: INCUTECH, March 1984.

Deaton, Brady J. "New Institutional Arrangements for Supplying Local Public Services under New Federalism with Special Reference to Education." *Amer. J. Ag. Econ.* Dec. 1983, pp. 1124–1130.

Deaton, Brady. "Relationships of Nonfarm Employment to Agricultural Development." Chapter 10 in Korsching, Peter and Gildner, Judith (eds.) *Interdependences of Agriculture and Rural Communities in the Twenty-first Century.* Ames, Iowa: The North Central Regional Center for Rural Development. 1986.

Deaton, Brady and **Kevin McNamara.** *Education in a Changing Environment.* Mississippi State University: Southern Rural Development Center. 1984.

Denison, Edward. "Education and Growth." In Daniel Rogers and Hirsch Ruchlin (eds.) *Economics and Education.* New York: The Free Press. 1971. pp. 237–250.

Edwards, Clark. "The Political Economy of Rural Development: Theoretical Perspectives." *Amer. J. Ag. Econ.* 58:914-921. Dec. 1976.

Flora, Cornelia and **David Darling.** "Community Capacity Building to Take Advantage of Opportunities for Agricultural and Rural Development." Chapter 11 in Korsching, Peter and Gildner, Judith (eds.) *Interdependencies of Agriculture and Rural Communities in the Twenty-first Century.* Ames, Iowa: The North Central Regional Center for Rural Development. 1986.

Fratoe, Frank. "Industrialization in the Rural Southeast: The Role of Education." USDA: Economic Research Service. Paper presented at Conference on Future of Education in Southeast. November 1980.

Hammock, John C. and **Gerald Dodd.** *Microbusiness and Employment in Central Maine: A Summary.* Cambridge, MA: ACCION International. 1979.

Hansen, W. Lee. "Total and Private Rates of Return to Investment in Schooling." In Daniel Rogers and Hirsch Ruchlin (eds.) *Economics and Education.* New York: The Free Press. 1971. pp. 174–186.

Hansen, Niles M. and **Richard Yukhin.** "Locational Preferences and Opportunity Costs in a Lagging Region: A Study of High School Seniors in Eastern Kentucky." *Journal of Human Resources.* V: 3. 1970, pp. 319–339.

Hines, Fred, Tweeten, Luther, and **Redfern, Martin.** "Social and Private Rates of Return to Investment in Schooling, By Race–Sex Groups and Regions." *The Journal of Human Resources.* V: 3 1970, pp. 292–309.

Hobbs, Daryl. "Education in Rural America: Object or Instrumentality of Rural Development?" Paper presented at National Conference on Rural Education. College Park, M.D. May 1979.

Hobbs, Daryl. *The New Infrastructure: Creating a Climate for Growth.* Research Triangle, NC: Southern Growth Policies Board. June 1985.

Honadle, Beth. "The Role of the Cooperative Extension System in Economic Development." Paper presented at the Conference on Small City and Regional Community Development. Stevens Point, WI. March 1986.

Jencks, Christopher, et al. *Inequality: Reassessment of the Effects of Family and Schooling in America.* New York: Basic Books. 1972.

Johnson, George E. and **Frank Stafford.** "Social Returns to Quantity and Quality of Schooling." *Journal of Human Resources.* VIII:2, 1973. pp. 139–155.

McGranahan, David. "Local Growth and the Outside Contacts of Influentials." *Rural Sociology 49* (Winter 1984). pp. 530–540.

Miller, James P. "Rethinking Small Businesses as the Best Way to Create Rural Jobs." *Rural Development Perspectives.* February 1985.

Mincer, Jacob. "Human Capital and Earnings." Chapter 1 in National Academy of Education, *Economic Dimensions of Education.* 1979.

Perlman, Richard. *The Economics of Education: Conceptual Problems and Policy Issues.* New York: McGraw–Hill Book Company. 1973.

Rawls, J. *A Theory of Justice.* Cambridge, MA: Harvard University Press. 1971.

Reich, Robert. *The Next American Frontier.* New York: Basic Books. 1983.

Rosenfeld, Stuart. "Economic Survival Skills: The Aim of Adult Basic Education." *Foresight,* Vol. 1, No. 3. Southern Growth Policies Board. September 1983.

Rosenfeld, Stuart A. "Education and Training as Industrial Policy." *Alert.* Southern Growth Policies Board. May 1984.

Schaub, James D. "New and Expanding Firms Provide New Jobs in Rural Georgia." *Rural Development Perspectives.* October 1984.

Schultz, Theodore W. "Investment in Human Capital." *A.E.R. 51,* No. 1: 1–17. March 1961.

Schultz, Theodore W. "The Rate of Return in Allocating Investment Resources to Education." *The Journal of Human Resources.* II:3, 1967. pp. 293–309.

Sher, Jonathan (ed). *Education in Rural America.* Boulder, CO: Westview Press. 1977.

Smith, Eldon, B. J. Deaton and **D. Kelch.** "Keys Identified to Get Industry to Rural Areas." *Rural Development Perspectives.* March 1980, pp. 32–35.

Southern Growth Policies Board. "Et cetera: Entrepreneurial Education, Public–Private Partnerships, Adult Basic Education." *Foresight.* Vol. 1, No. 5. Research Triangle Park, NC. January 1984.

Southern Growth Policies Board. "Education and Training for New and Small Businesses." *Foresight.* Vol. 1, No. 1. Research Triangle Park, NC. May 1983.

Tevis, Cheryl. "The Fight to Keep Rural School Bells Ringing." *Successful Farming.* April, 1986.

Tweeten, Luther. "Education Has Role in Rural Development." *Rural Development Perspectives.* October 1980. pp. 9–13.

Welch, Finis. "Human Capital Theory: Education, Discrimination, and Life Cycles." *American Economic Review.* Vol. 65, No. 2, May 1975, pp. 63–73.

Windham, Douglas O. *Education, Equality and Income Redistribution.* Lexington, MA: Heath Lexington Books. 1970

Williamson, Bill. *Education, Social Structure and Development.* New York: Holmes & Meier Publishers, Inc. 1979.

Wilms, Wellford W. "Vocational Education and Job Success." Phi *Delta Kappan.* 65, January, 1984. pp. 347–349.